Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0143-16-F(R1) Plant ID: 0143

Effective Date: 11/23/2016 Expiration Date: 11/30/2021
Issue Date: 5/1/2019

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: MPLX Terminals, LLC—Kramers Lane Terminal
Owner: MPLX Terminals, LLC
3920 Kramers Lane
Louisville, Kentucky 40216

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	VOC	HAPs	Single HAPs
Tons/year:	100	25	10

Permit Writer: Narathip Chitradon

Air Pollution Control Officer
5/1/2019

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FEDOOP Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Description
Initial	0076-97-F	04/22/1997	03/16/1997	Initial	Initial Permit Issuance
R1	0076-97-F(R1)	03/05/1999	02/05/1999	Admin	Name Change from Marathon Oil Company to Marathon Ashland Petroleum, LLC
R2	0076-97-F(R2)	04/04/2000	03/05/2000	Minor	Revised General Conditions #4, #11, #12, and #13; new conditions #13 and #14 were added
R3	0076-97-F(R3)	06/12/2002	05/12/2002	Renew	Scheduled Permit Renewal
R4	O-0143-16-F	11/23/2016	09/07/2016	Renew	Incorporated Construction Permits listed in History table; Incorporated Federal Regulation 40 CFR 63 Subpart BBBBBB; Made name change from Marathon Petroleum Company, LP to MPLX Terminals, LLC
R5	O-0143-16-F(R1)	05/01/2019	03/19/2019	Signif.	Incorporated Construction Permit C-0143-1005-18-F

Construction Permit History

Permit No.	Issue Date	Description
435-07-C[1]	08/31/2008	One (1) Catalytic Oxidizer to control VOC emissions from Soil Vapor Extraction
23-09-C(R1)	01/31/2009	Storage Tank AA-1-5 (Additive)
183-04-C(R2)	05/19/2009	Two (2) Vacuum Trucks
189-04-C(R2)	05/19/2009	Two (2) Carbon Adsorption Units for Vacuum Trucks
163-04-C(R2)	05/19/2009	Four (4) Portable FRAC Tanks
124-09-C	05/31/2009	Storage Tank 80-10 (Distillate)
C-0143-1005-18-F	05/02/2018	Butane blending operation

[1] The equipment for permit 435-07-C was never installed at the terminal.

Permit Applications

Application	Date Rec'd	Type
-	01/22/2007	FEDOOP renewal application
8653	10/07/2009	Revised FEDOOP renewal application—Added construction permit equipment
76183	04/04/2016	Ownership Change – Marathon Petroleum Company, LP to MPLX Terminals, LLC
76877	04/28/2016	Application Forms for Barge Loading Operation: AP-100B (Emission Unit Definition) and AP-100C (Emission Data)
76878	04/26/2016	Application Form AP-100G – Alternative Operating Scenario
77266	05/18/2016	Application Form AP-100P – Insignificant Activities
77817	06/15/2016	Updated 1.05 Compliance Plan
77818	06/15/2016	Updated PTE
78590	07/27/2016	Revised STAR EA Demo
91113	03/12/2018	Application including Form AP-100A, Administrative Information; AP-200A, Generic Process; AP-200N, VOC Storage Tank; process flow diagram; photos; emission calculations; SDS; and filing fee.
91572	04/12/2018	Certificate of Authorization

Abbreviations and Acronyms

AP-42	- AP-42, *Compilation of Air Pollutant Emission Factors,* published by U.S.EPA
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
HCl	- Hydrogen chloride
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
MSDS	- Material Safety Data Sheet
mmHg	- Millimeters of mercury column height
MM	- Million
NAICS	- North American Industry Classification System
NO_x	- Nitrogen oxides
PM	- Particulate Matter
PM_{10}	- Particulate Matter less than 10 microns
$PM_{2.5}$	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SDS	- Safety Data Sheet
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO_2	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.

5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company. The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of

Regulation	Title
	Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, KY 40203-3137

Plant-wide[2]

Plant-wide Description

Distribution of gasoline products

Plant-wide Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1 through 5
40 CFR 63 Subpart A	General Provisions	1 through 16
40 CFR 63 Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities	11080-11085, 11087-11089, 11092-11095, 11098-11100

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1 through 2
5.01	General Provisions	1 through 2
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	1 through 3, 4.110, 5
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 7
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

[2] This section consists of regulations that apply to multiple emission units found at the facility. Regulation 40 CFR Part 63 Subpart BBBBBB is applicable to the equipment found in Emission Units U1, Storage Tanks, as well as U2, Truck Loading Rack. In addition, Regulation 40 CFR Part 63 Subpart BBBBBB includes the fugitive components in gasoline service.

Plant-Wide Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

The owner or operator shall limit the total plant-wide VOC emissions from the plant to less than 100 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1]

b. **HAP**

i. The owner or operator shall limit the total plant-wide combined HAPs emissions from the plant to less than 25 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1]

ii. The owner or operator shall limit the total plant-wide single HAP emissions from the plant to less than 10 tons during any consecutive 12-month period. [Regulation 2.17, section 5.1]

For Regulation 40 CFR 63 Subpart BBBBBB:

iii. The owner or operator must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the District, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11085(a)]

c. **TAC**

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.[3] [Regulations 5.01 and 5.21]

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal. The owner or operator shall monitor and maintain records of the following information.

[3] The District received an updated environmental acceptability (EA) demonstration on July 27, 2016 that provided TAC emissions from the facility. The company demonstrated that all processes, except for the truck loading rack operation, were environmentally acceptable due to the uncontrolled potential emissions being below de minimis levels. The company demonstrated that the truck loading rack operation was environmentally acceptable through modeling.

a. **VOC**

i. The owner or operator shall monthly maintain records, including calculations, of their calendar month and consecutive 12-month, plant-wide VOC emissions. [Regulation 2.17, section 5.2]

ii. The owner or operator shall complete the scheduled daily, weekly, monthly and annual inspections. Records for each respective inspection must be kept.[4] [Regulation 2.17, section 5.2, Regulation 1.05 Compliance Plan, revision received June 2016]

b. **HAP**

i. The owner or operator shall monthly maintain records, including calculations, of their calendar month and consecutive 12-month, plant-wide combined and single HAP emissions. [Regulation 2.17, section 5.2]

ii. The owner or operator shall maintain a copy of the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for each HAP-containing material used at the plant. The MSDS/SDS shall have documentation of the weight percent of each individual HAP. [Regulation 2.17, section 5.2]

For Regulation 40 CFR 63 Subpart BBBBBB:

iii. Each owner or operator subject to the equipment leak provisions of 40 CFR 63.11089 shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. For facilities electing to implement an instrument program under 40 CFR 63.11089, the record shall contain a full description of the program. [40 CFR 63.11094(d)]

1) Each owner or operator of a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station subject to the provisions of 40 CFR 63 Subpart BBBBBB shall perform a monthly leak inspection of all equipment in gasoline service, as defined in 40 CFR 63.11100 of Subpart BBBBBB[5]. For this inspection, detection methods incorporating sight, sound, and smell are acceptable.[6] [40 CFR 63.11089(a)]

2) A log book shall be used and shall be signed by the owner or operator at the completion of each inspection required by 40 CFR

[4] MPLX Terminals, LLC—Kramers Lane Terminal currently has an electronic system called the Field Task Management System (FTMS) that assigns scheduled inspections to the employees at the terminal.

[5] As defined in 40 CFR 63.11100 of Subpart BBBBBB, equipment means each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in the gasoline liquid transfer and vapor collection systems. This definition also includes the entire vapor processing system except the exhaust port(s) or stack(s).

[6] For the monthly leak inspection, the assigned employee walks the facility inspecting the components (tanks, piping, loading rack) looking for leaks, smelling for vapors, and listening for any unusual sounds. Any findings are documented and, if any, corrective action is performed in a timely manner—within five days for the first attempt of repairs and within 15 days for the final set of repairs.

63.11089(a)[7]. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility. [40 CFR 63.11089(b)]

3) Each detection of a liquid or vapor leak shall be recorded in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided under 40 CFR 63.11089(d). [40 CFR 63.11089(c)]

4) Delay of repair of leaking equipment will be allowed if the repair is not feasible within 15 days. The owner or operator shall provide in the semiannual report specified in 40 CFR 63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed. [40 CFR 63.11089(d)]

iv. Each owner or operator of an affected source subject to equipment leak inspections under 40 CFR 63.11089 shall record in the log book for each leak that is detected the information specified in 40 CFR 63.11094(e)(1) through (7)[8]. [40 CFR 63.11094(e)]

1) The equipment type and identification number. [40 CFR 63.11094(e)(1)]

2) The nature of the leak (i.e., vapor or liquid) and the method of detection (i.e., sight, sound, or smell). [40 CFR 63.11094(e)(2)]

3) The date the leak was detected and the date of each attempt to repair the leak. [40 CFR 63.11094(e)(3)]

4) Repair methods applied in each attempt to repair the leak. [40 CFR 63.11094(e)(4)]

5) "Repair delayed" and the reason for the delay if the leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR 63.11094(e)(5)]

6) The expected date of successful repair of the leak if the leak is not repaired within 15 days. [40 CFR 63.11094(e)(6)]

7) The date of successful repair of the leak. [40 CFR 63.11094(e)(7)]

v. Each owner or operator of an affected source under this subpart shall keep records as specified in 40 CFR 63.11094(g)(1) and 40 CFR 63.11094(g)(2). [40 CFR 63.11094(g)]

[7] The monthly equipment leak inspections are recorded in an equipment leak detection log.

[8] ibid.

1) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.11094(g)(1)]

2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.11085(a) of Subpart BBBBBB, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.11094(g)(2)]

c. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS/SDS, analysis of emissions, and/or modeling results. [9] [Regulation 2.17, section 5.2]

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis* at the time of the change. [Regulation 2.17, section 5.2]

Results of Adjusted Risk

Emission Process	TAC	Maximum Ambient Concentration ($\mu g/m^3$)	BACc Benzene ($\mu g/m^3$)	Individual Process Risk, R_c	Individual Process EAG_C
Truck Loading Rack w/ VRU	Benzene	0.595	0.45	1.32	10.0
Truck Loading Rack w/ PVCU	Benzene	0.152	0.45	0.34	10.0
Truck Fugitive Emissions	Benzene	1.497	0.45	3.33	10.0
Facility-Wide R_c – With VRU				**4.65**	
Facility-Wide R_c – With PVCU				**3.67**	

[9] An updated version of the STAR Environmental Acceptability Report was received by the District on July 27, 2016. All TACs from the processes at the facility were below de minimis, except for truck fugitive benzene emissions and the controlled benzene emissions of the truck loading operation of gasoline using either a VRU or PVCU were above de minimis levels. In order to demonstrate environmental acceptability, the source performed Tier 4 modeling, using AERMOD. The company noted the highest individual, process risks to be below the environmental acceptability goal (EAG) of 10.0 for individual processes on industrial property defined under District Regulation 5.21. The company also noted the highest individual, process risks to be below the environmental acceptability goal (EAG) of 1.0 for individual processes on non-industrial property defined under District Regulation 5.21.

Facility-Wide EAG_C		**75.0**

Results of Non-Adjusted Risk

Emission Process	TAC	Maximum Ambient Concentration ($\mu g/m^3$)	BACc Benzene ($\mu g/m^3$)	Individual Process Risk, R_c	Individual Process EAG_C
Truck Loading Rack w/ VRU	Benzene	0.153	0.45	0.34	1.0
Truck Loading Rack w/ PVCU	Benzene	0.038	0.45	0.08	1.0
Truck Fugitive Emissions	Benzene	0.206	0.45	0.46	1.0
Facility-Wide R_c – With VRU				**0.80**	
Facility-Wide R_c – With PVCU				**0.54**	
Facility-Wide EAG_C					**7.5**

S3. **Reporting (Regulation 2.17, section 5.2)**

a. **VOC**

The owner or operator shall annually report their calendar month and consecutive 12-month, plant-wide VOC emissions. [Regulation 2.17, section 5.2]

b. **HAP**

i. The owner or operator shall annually report their calendar month and consecutive 12-month, plant-wide combined and single HAP emissions. [Regulation 2.17, section 5.2]

For Regulation 40 CFR 63 Subpart BBBBBB:

The owner or operator shall submit all required compliance reports at least once every six months, unless more frequent reporting is required by an applicable requirement. All reports shall be sent to the District at the address shown in General Condition 17 in accordance with General Condition 12 and must be postmarked by the 30th day following the end of each reporting period, unless specified elsewhere in this permit.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

Reporting Period	Report Due Date
January 1 - June 30	July 30
July 1 - December 31	January 30 of the following year

ii. Each owner or operator of any affected source under 40 CFR 63 Subpart BBBBBB must submit additional notifications specified in the General Provisions of 40 CFR 63.9, (Subpart A) as applicable. [40 CFR 63.11093(d)]

iii. Each owner or operator of a bulk terminal or a pipeline breakout station subject to the control requirements of this subpart shall include in a semiannual compliance report to the District the following information, as applicable: [40 CFR 63.11095(a)]

1) For equipment leak inspections, the number of equipment leaks not repaired within 15 days after detection, as required under 40 CFR 63.11089(c). [40 CFR 63.11095(a)(3)]

iv. Each owner or operator of an affected source subject to the control requirements of this subpart shall submit an excess emissions report to the District at the time the semiannual compliance report is submitted. Excess emissions events under this subpart, and the information to be included in the excess emissions report, are specified in 40 CFR 63.11095(b)(5). [40 CFR 63.11095(b)]

1) For each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection, as required under 40 CFR 63.11089(c): [40 CFR 63.11095(b)(5)]

(a) The date on which the leak was detected; [40 CFR 63.11095(b)(5)(i)]

(b) The date of each attempt to repair the leak; [40 CFR 63.11095(b)(5)(ii)]

(c) The reasons for the delay of repair; and [40 CFR 63.11095(b)(5)(iii)]

(d) The date of successful repair. [40 CFR 63.11095(b)(5)(iv)]

v. Each owner or operator of an affected source under this subpart shall submit a semiannual report including the number, duration, and a brief description of each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.11085(a) of Subpart BBBBBB, including actions taken to correct a malfunction. The report may be submitted as a part of the semiannual compliance report, if one is required. [40 CFR 63.11095(d)]

c. **TAC**

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that

operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions. [Regulation 5.21]

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. [Regulation 5.21 sections 4.22 – 4.24]

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material as described in S2.c.ii. [Regulation 5.21]

Alternative Operating Scenario

The owner or operator is authorized to bring onsite vacuum trucks for temporary maintenance and/or spill response usage. The vacuum trucks are not owned by MPLX Terminals, LLC; they are brought from offsite by hired contractors to vacuum any waste water or materials MPLX carries. The facility shall continue to calculate emissions from this equipment to ensure compliance is maintained.[10]

[10] MPLX Terminals, LLC—Kramers Lane Terminal will calculate and record the emissions of this equipment as truck loading emissions without controls.

Emission Unit U1: Storage Tanks

U1 Unit Description

Multiple storage tanks containing various gasoline products.

U1 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.02	Definitions	Appendix A
6.13	Standard of Performance for Existing Storage Vessels for Volatile Organic Compounds	1 through 6
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 8
40 CFR 60 Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	110-113
40 CFR 63 Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities	11080-11085, 11087-11089, 11092-11095, 11098-11100

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1 through 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 7
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U1 Equipment

Emission Point ID (Tank ID)	Product Stored	Maximum Capacity (gallons)	Roof Type [a]	Date Installed	Applicable Regulations
E3 [d] (35-1)	Gasoline	1,317,582	DIF	1961	6.13, 40 CFR 63 Subpart BBBBBB, STAR[b]
E4 [d] (80-11)	Gasoline	3,210,228	IFR	1977	7.12, 40 CFR 60 Subpart K, 40 CFR 63 Subpart BBBBBB, STAR[b]
E5 [d] (20-4)	Gasoline	782,208	IFR	1970	6.13, 40 CFR 63 Subpart BBBBBB, STAR[b]
E6 [d] (55-2)	Gasoline	2,002,683	DIF	1961	6.13, 40 CFR 63 Subpart BBBBBB, STAR[b]
E7 [d] (217-14)	Gasoline	8,515,038	IFR	1978	7.12, 40 CFR 60 Subpart K, 40 CFR 63 Subpart BBBBBB, STAR[b]
E8 [d] (30-6)	Ethanol	1,217,160	IFR	1975	7.12, 40 CFR 60 Subpart K, STAR[b]
E9 (80-10)	Distillate	3,226,062	CFR	1977	Insignificant Activity[c]
E10 (25-7)	Distillate	1,053,402	CFR	1975	Insignificant Activity[c]
E11 (AA-8-1)	Additive	7,774	CFR	After 1980	Insignificant Activity[c]
E12 (AA-8-2)	Additive	7,774	CFR	After 1980	Insignificant Activity[c]
E13 (AA-14-3)	Additive	15,737	CFR	1972	Insignificant Activity[c]
E14 (AA-1-1)	Additive	1,016	HFR	After 1976	Insignificant Activity[c]
E15 (AA-1-5)	Additive	1,003	HFR	2009	Insignificant Activity[c]
E16 [d] (T-5)	Transmix/ Slop	418,582	IFR	1978	7.12, 40 CFR 60 Subpart K, STAR[b]
E17 (WA-12-1)	Waste Water	12,622	HFR	Between 1973 - 1978	6.13/7.12, STAR[b]
E18 (WA-12-2)	Waste Water	12,622	HFR	Between 1973 – 1978	6.13/7.12, STAR[b]
E19 (1-20)	Waste Water	30,480	CFR	2005	7.12, STAR[b]

[a] The roof types are the following:
FR – Vertical, Fixed Roof Storage Tank (No Floating Roof)
IFR – Vertical, Internal Floating Roof Storage Tank
CFR - Coned, Vertical, Fixed Roof Storage Tank (No Floating Roof)
CIF – Coned, Vertical, Internal Floating Roof Storage Tank
DFR - Domed, Vertical, Fixed Roof Storage Tank (No Floating Roof)
DIF – Domed, Vertical, Internal Floating Roof Storage Tank
HFR – Horizontal, Fixed-Roof Storage Tank (No Floating Roof)

[b] STAR Regulations include 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

[c] These storage tanks store product that are listed as Insignificant Activities in District Regulation 1.02, Appendix A, Section 3.9.2.

[d] The storage tank has the possibility of storing either gasoline, ethanol, transmix, or distillate.

U1 Controls

There are no control devices associated with Emission Unit U1.

U1 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

i. See Plant-Wide Specific Condition S1.a.

For storage tanks subject to Regulations 6.13 and 7.12:

ii. For storage tank Emission Points E3 through E7, and E16, if the true vapor pressure of the volatile organic compounds as stored, is equal to or greater than 78 mm Hg (1.5 psia) but not greater than 570 mm Hg (11.1 psia), the owner or operator shall equip the storage vessels with a floating roof.[11] [Regulations 6.13 and 7.12, section 3.1]

iii. For storage tank Emission Points E3 through E8 and E16 through E19, and if the true vapor pressure of the volatile organic compound, as stored, is equal to or greater than 1.5 psia, the owner or operator shall equip the storage vessels with a permanent submerged fill pipe.[12] [Regulations 6.13 and 7.12, section 3.3]

For storage tanks subject to Regulation 40 CFR 60 Subpart K:

iv. For storage tank Emission Points E4, E7, E8, and E16, if the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than 78 mm Hg (1.5 psia) but not greater than 570 mm Hg (11.1 psia), the storage vessel shall be equipped with a floating roof. (See footnote 10 for Regulations 6.13 and 7.12, section 3.1) [40 CFR 60.112(a)(1)]

b. **HAP**

i. See Plant-Wide Specific Conditions S1.b.i. and ii.

For Regulation 40 CFR 63 Subpart BBBBBB:

ii. For storage tank Emission Points E3 through E7, the owner or operator must comply with the following requirements: [Table 1, 40 CFR 63.11087(a)]

1) Equip each internal floating roof gasoline storage tank according to the following applicable requirements of Subpart Kb:[13] [Table 1, Option 2(b), 40 CFR 63.11087(a) and 40 CFR 60.112b(a)(1)]

(a) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all

[11] MPLX Terminals, LLC—Kramers Lane Terminal equips each storage tank containing product with a true vapor pressure greater than 1.5 psia with an internal floating roof.

[12] All storage tanks at MPLX Terminals, LLC—Kramers Lane Terminal are equipped with submerged fill pipes.

[13] MPLX Terminals, LLC—Kramers Lane Terminal has equipped each of their gasoline, as well as ethanol, storage tanks with an internal floating roof.

times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112b(a)(1)(i)]

(b) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: [40 CFR 60.112b(a)(1)(ii)]

(i) A foam- or liquid-filled seal mounted in contact with the liquid (liquid mounted seal). A liquid mounted seal means a foam or liquid filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank. [40 CFR 60.112b(a)(1)(ii)(A)]

(ii) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. [40 CFR 60.112b(a)(1)(ii)(C)]

(c) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. [40 CFR 60.112b(a)(1)(iii)]

c. **TAC**

See Plant-Wide Specific Condition S1.c.[14]

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal unless otherwise specified in the permit. The owner or operator shall monitor and maintain records of the following information.

a. **VOC**

i. See Plant-Wide Specific Condition S2.a.

[14] The District received an updated environmental acceptability (EA) demonstration on July 27, 2016 that provided TAC emissions for the company's storage tanks. The information in the report demonstrated that the uncontrolled potential emissions from the storage tanks can be classified as de minimis.

ii. The owner or operator shall maintain readily accessible records of the material stored in each storage vessel. The records shall provide documentation of the content and vapor pressure contained in each storage tank. Records can include a copy of the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for each of the products found in the storage tanks. If the contents of the storage vessels are changed, a record shall be made of the new contents, the new vapor pressure, and the date of the change in service. [Regulation 2.17, section 5.2]

For storage tanks subject to Regulations 6.13 and 7.12:

iii. The owner or operator shall ensure that there shall be no visible holes, tears, or other openings in the seal or any seal fabric[15]. [Regulations 6.13 and 7.12, section 4.1]

1) The owner or operator shall perform and document the results of the annual visual inspections for each storage tank equipped with an internal floating roof. Any issues shall be addressed in accordance with the BBBBBB monitoring requirements of 40 CFR 63.11092(e)(1). [Regulation 2.17, section 5.2]

iv. The owner or operator shall ensure that all openings, except stub drains, shall be equipped with covers, lids, or seals such that: [Regulations 6.13 and 7.12, section 4.2]

1) The cover, lid, or seal is in the closed position at all times except when in actual use; and [Regulations 6.13 and 7.12, section 4.2.1]

2) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and [Regulations 6.13 and 7.12, section 4.2.2]

3) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [Regulations 6.13 and 7.12, section 4.2.3]

v. The true vapor pressure shall be determined by using the average monthly storage temperature and typical Reid vapor pressure of the contained liquid or from typical available data on the contained liquid. Supporting analytical data shall be requested by the District if there is a question on the values reported. [Regulations 6.13 and 7.12, section 5.2]

For storage tanks subject to Regulation 40 CFR 60 Subpart K:

vi. The owner or operator shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [40 CFR 60.113(a)]

[15] All internal floating roof seals are visually inspected through roof hatches annually and documented. Inspections are conducted to check the condition of the roof seal for any possible issues, such as holes, tears, gaps, and look for liquid on the internal floating roof.

vii. Available data on the typical Reid vapor pressure and the maximum expected storage temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517, unless the District specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.113(b)]

b. **HAP**

i. See Plant-Wide Specific Condition S2.b.i.

For Regulation 40 CFR 63 Subpart BBBBBB:

ii. For storage tank Emission Points E3 through E7, the owner or operator must perform inspections of the floating roof system according to the requirements of 40 CFR 60.113b(a) (Subpart Kb). [40 CFR 63.11092(e)(1)]

1) Prior to filling the storage vessel with VOL, visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.[16] [40 CFR 60.113b(a)(1)]

2) For Vessels equipped with a liquid mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill.[17] If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30 day extension may be requested from the District in the inspection report required in the Reporting and Recordkeeping Requirements of 40 CFR 60.115b(a)(3) (Subpart Kb). Such a request for an extension must document that alternate storage capacity is unavailable and specify

[16] Prior to filling a storage tank at MPLX Terminals, LLC—Kramers Lane Terminal, the floating roof and all seals are physically inspected and repaired or replaced if necessary.

[17] MPLX Terminals, LLC—Kramers Lane Terminal visually inspects the internal floating roof seals through roof hatches annually. MPLX Terminals, LLC—Kramers Lane Terminal conducts inspections to check the condition of the roof seal for any possible issues, such as holes, tears, gaps, and look for liquid on the internal floating roof. Any deficiency identified during the inspection is communicated to the terminal manager and environmental professional, and is followed by corrective action.

a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. [40 CFR 60.113b(a)(2)]

3) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL.[18] In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in the Testing and Procedures section of 40 CFR 60.113b(a)(2) (Subpart Kb) and at intervals no greater than 5 years in the case of vessels specified in 40 CFR 60.113b(a)(4) of the same section. [40 CFR 60.113b(a)(4)]

4) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(a)(1) and (4) to afford the Administrator the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling. [40 CFR 60.113b(a)(5)]

iii. For storage tank Emission Points E3 through E7, the owner or operator shall keep records as specified in the Reporting and Recordkeeping Requirements of 40 CFR 60.115b of Subpart Kb, except records shall be kept for at least 5 years. [40 CFR 63.11094(a)]

[18] When MPLX takes a tank out of service, all seals are physically inspected and replaced if necessary. The rest of the internal floating roof and associated components are also inspected. Any components found to be deficient will be replaced or repaired before placing the tank back into service.

1) The owner or operator shall keep a record of each inspection performed as required by the Testing and Procedures section of 40 CFR 60.113b(a)(1), (a)(2), and (a)(4) (Subpart Kb). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)]

c. **TAC**

See Plant-Wide Specific Condition S2.c.

S3. **Reporting (Regulation 2.17, section 5.2)**

a. **VOC**

i. See Plant-Wide Specific Condition S3.a.

For storage tanks subject to Regulations 6.13 and 7.12:

ii. There are no reporting requirements for Regulations 6.13 and 7.12.

For storage tanks subject to Regulation 40 CFR 60 Subpart K:

iii. There are no reporting requirements for Regulation 40 CFR 60 Subpart K.

b. **HAP**

i. See Plant-Wide Specific Condition S3.b.i.

For Regulation 40 CFR 63 Subpart BBBBBB:

The owner or operator shall submit all required compliance reports at least once every six months, unless more frequent reporting is required by an applicable requirement. All reports shall be sent to the District at the address shown in General Condition 17 in accordance with General Condition 12 and must be postmarked by the 30th day following the end of each reporting period, unless specified elsewhere in this permit.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

Reporting Period	Report Due Date
January 1 - June 30	July 30
July 1 - December 31	January 30 of the following year

ii. For storage tank Emission Points E3 through E7, the owner or operator shall include in a semiannual compliance report the following information specified in the Reporting and Recordkeeping requirements of 40 CFR 60.115b(a) (Subpart Kb). [40 CFR 63.11095(a)(1)]

1) Furnish the District with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1).

This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3). [40 CFR 60.115b(a)(1)]

2) If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the District within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. [40 CFR 60.115b(a)(3)]

c. **TAC**

See Plant-Wide Specific Condition S3.c.

Alternative Operating Scenario

Each internal floating roof storage tank has the possibility of storing gasoline, ethanol, transmix, or distillate. MPLX Terminals, LLC shall continue to follow any applicable requirements listed under the Standards, Monitoring and Record Keeping, and Reporting sections of this Emission Unit.

The owner or operator is authorized to bring onsite portable, horizontal fixed-roof storage (FRAC) tanks for temporary maintenance and/or spill response usage. The FRAC tanks are not owned by MPLX Terminals, LLC; they are brought onsite by hired contractors to hold any waste water or materials MPLX carries. The facility shall continue to calculate emissions from this equipment to ensure compliance is maintained.[19]

[19] MPLX Terminals, LLC—Kramers Lane Terminal will record the emissions from the products loaded and stored in the FRAC tanks to maintain compliance.

Emission Unit U2: Truck Loading Rack

U2 Unit Description

One (1) terminal truck loading rack with control units used to load various finished gasoline products from the bulk terminal storage tanks into cargo tanks for distribution to consumers.

U2 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.04	Performance Tests	1 through 3
1.05	Compliance with Emission Standards and Maintenance Requirements	1 through 5
6.43	Volatile Organic Compound Emission Reduction Requirements	1 through 4, 15
40 CFR 60 Subpart A	General Provisions	1 through 18
40 CFR 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals	500 through 503, 505
40 CFR 63 Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities	11080-11085, 11087-11089, 11092-11095, 11098-11100

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1 through 2
5.01	General Provisions	1 through 2
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	1, 2, 4.16
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 7
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
6.21	Standard of Performance for Existing Gasoline Loading Facilities at Bulk Terminals	1 through 6
6.22	Standard of Performance for Existing Volatile Organic Materials Loading Facilities	1 through 5
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards	1, 2, 3.1, 3.62

U2 Equipment

Emission Point ID	Description Make/Model	Maximum Capacity	Control Device (Control ID)	Stack ID	Installation Date

E1	One (1) truck loading rack consisting of four (4) bays each consisting of loading arms: Bay 1 – Seven Arms Bay 2 – Six Arms Bay 3 – Seven Arms Bay 4 – Six Arms	3,264,000 gallons per 24 hours for the entire truck loading rack	C1 & C2	S1	1975-1980

U2 Controls

Control ID	Description	Make/Model	Pollutant Controlled	Installation Date
C1	One (1) dual-bed carbon adsorption vapor recovery unit (VRU) used for collecting and controlling gasoline vapors from the truck loading rack operations	John Zink AAT-X-1650-12-10-12	VOC	1994
C2	One (1) portable vapor combustion unit (PVCU) used as a backup control unit for loading rack	The following include, but are not limited to, possible models[20] that can be temporarily used by the terminal, depending on availability and service needs: 1) R.A. Nichols Engineering (RANE1), Model RAN P4E11DB, S/N E19/B9 2) R.A. Nichols Engineering (RANE2), Model RAN P4E11DB, S/N E21/B10 3) R.A. Nichols Engineering (RANE3), Model RAN P4E11DB, S/N E23/B12 4) John Zink Flare 1, Model GV-LH-8400-2 5) John Zink Flare 2, Model LX10X25	VOC	N/A

[20] The John Zink portable vapor combustion units are open flare design and the RANE vapor combustion units are an enclosed flare design.

U2 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

i. See Plant-Wide Specific Condition S1.a.

ii. Loading of gasoline is not allowed unless the emissions are being controlled by the vapor recovery unit (VRU) or a vapor combustion unit (PVCU).[21] The owner or operator shall control the emissions from the terminal loading rack with a PVCU (enclosed or open flare) during all periods of loading gasoline when the VRU is offline. [Regulation 2.17, section 5.1]

iii. The owner or operator shall not allow or cause the throughput of the following product types to exceed the limits during any consecutive 12-month period for the truck loading operation: [Regulation 2.17, section 5.1]

Limit (gal/12-month period)	Product
550,000,000	Gasoline
600,000,000	Distillates
100,000,000	Ethanol
100,000	Uncontrolled Distillate Loading[22]

iv. For the VRU, the owner or operator shall maintain the maximum vacuum pulled during the regeneration cycle at or above 24 inches of mercury (Hg). [Regulation 2.17, section 5.1, Regulation 1.05 Compliance Plan, revision received June 2016]

v. For the VRU, the owner or operator shall maintain the gasoline supply temperature at or below 98 °F. [Regulation 2.17, section 5.1, Regulation 1.05 Compliance Plan, revision received June 2016]

For Regulation 6.21:

vi. No owner or operator of any loading facility shall load gasoline unless such facility is equipped with a vapor control system which is in good working order and in operation. [Regulation 6.21, section 3.1]

vii. Loading shall be accomplished in such a manner that all displaced vapor and air will be vented only to the vapor collection system. Measures shall be taken to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected. [Regulation 6.21, section 3.2]

[21] The terminal loading rack at MPLX Terminals, LLC—Kramers Lane Terminal automatically shuts down if neither control device is operating. If there is an upset or malfunction, the loading and control device automatically shuts down.

[22] This will occur only during emergency situations where distillate will be loaded into dedicated trailers.

viii. No owner or operator shall permit the volatile organic compound emissions from the vapor control device to exceed 80 milligrams per liter of gasoline loaded.[23] [Regulation 6.21, section 3.3]

ix. No owner or operator shall open tank hatches or allow hatches to be opened at any time during loading operations if bottom-fill is practiced. If top-submerged fill is practiced, the hatch is to be opened the minimum time necessary to install and remove the submerged fill pipe and associated vapor collection equipment.[24] [Regulation 6.21, section 3.4]

x. No owner or operator shall permit gasoline to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation. [Regulation 6.21, section 3.5]

xi. No owner or operator of a bulk gasoline terminal subject to this regulation shall allow loading unless the following provisions are met: [Regulation 6.21, section 3.6]

1) The vapor control system and associated equipment are designed and operated to prevent gauge pressure in the tank truck or trailer from exceeding 450 mm water (18 inches water) and prevent vacuum from exceeding 150 mm water (six inches water); [Regulation 6.21, section 3.6.1]

2) A pressure tap or any equivalent system as approved by the District is installed on the vapor collection system so that a liquid manometer, supplied by the owner or operator, can be connected to the tap in order to determine compliance with Regulation 6.21, section 3.6.1. The pressure tap shall be installed by the owner or operator as close as possible to the connection with the tank truck or trailer, and shall consist of a 1/4 inch tubing connector which is compatible with the use of 3/16 inch inside diameter plastic tubing; [Regulation 6.21, section 3.6.2]

3) During loading operations there is no reading greater than or equal to 100% of the lower explosive limit (LEL, measured as propane) at a distance of 2.5 centimeters (one inch) from the potential leak source associated with the vapor collection system of a bulk gasoline terminal as detected by a combustible gas detector using the test procedure in Regulation 6.21, section 5.4; and [Regulation 6.21, section 3.6.3]

[23] Compliance with 40 CFR 60.502(b) requirements from 40 CFR 60 Subpart XX will demonstrate compliance with this standard. MPLX Terminals, LLC—Kramers Lane Terminal conducted compliance testing on April 19, 2016 to determine the VOC emission rate from the Vapor Recovery Unit (VRU) during the loading of gasoline into tanker trucks. The VOC emission rate was 0.11 mg VOC/liter of gasoline loaded. MPLX previously conducted a performance test on May 11, 2005.

[24] Bottom filling is practiced during loading operations at MPLX Terminals, LLC—Kramers Lane Terminal.

4) The tank truck or trailer has a valid Kentucky pressure-vacuum test sticker attached and visibly displayed. [Regulation 6.21, section 3.6.4]

For Regulation 6.22:

xii. No owner or operator of any loading facility from which 20,000 gallons or more of volatile organic materials are loaded in any one day shall load such materials unless such facility is equipped with a device which reduces the emissions of all hydrocarbon vapors and gases by at least 90% by weight, and which is properly installed, in good working order, and in operation. Loading shall be accomplished in such a manner that all displaced vapor and air will be vented only to the vapor recovery system. Measures shall be taken to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected. [Regulation 6.22, section 3.2]

For Regulation 40 CFR 60 Subpart XX:

xiii. Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compound vapors displaced from tank trucks during product loading. [40 CFR 60.502(a)]

xiv. The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 10 milligrams of total organic compound per liter of gasoline loaded. [25] [40 CFR 60.502(b)]

xv. Each vapor collection system shall be designed to prevent any total organic compound vapors collected at one loading rack from passing to another loading rack. [40 CFR 60.502(d)]

xvi. Loading of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures: [40 CFR 60.502(e)]

1) The owner or operator shall obtain the vapor tightness documentation described in the Reporting and Recordkeeping of 40 CFR 60.505(b) (Subpart XX) for each gasoline tank truck, which is to be loaded at the affected facility. [40 CFR 60.502(e)(1)]

[25] The VOC emission standard for Bulk Gasoline Terminals subject to 40 CFR Part 60, Subpart XX is 35 mg VOC/liter of gasoline loaded; however, MPLX Terminals, LLC—Kramers Lane Terminal requested an emission limit of 10 mg VOC/liter of gasoline loaded. MPLX Terminals, LLC—Kramers Lane Terminal conducted compliance testing on April 19, 2016 to determine the VOC emission rate from the Vapor Recovery Unit (VRU) during the loading of gasoline into tanker trucks. The VOC emission rate was 0.11 mg VOC/liter of gasoline loaded. MPLX previously conducted a performance test on May 11, 2005.

2) The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility. [40 CFR 60.502(e)(2)]

3) The owner or operator shall cross-check each tank identification number obtained in 40 CFR 502.(e)(2) of Subpart XX with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded[26], unless either of the following conditions is maintained: [40 CFR 60.502(e)(3)(i)]

(a) If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or [40 CFR 60.502(e)(3)(i)(A)]

(b) If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semi-annually. [40 CFR 60.502(e)(3)(i)(B)]

(c) If either the quarterly or semiannual cross-check provided in 40 CFR 60.502(e)(3)(i)(A) and (B) of Subpart XX reveals that these conditions were not maintained, the source must return to bi-weekly monitoring until such time as these conditions are again met. [40 CFR 60.502(e)(3)(ii)]

4) The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the documentation cross-check in 40 CFR 502.(e)(3) of Subpart XX. [40 CFR 60.502(e)(4)]

5) The terminal owner or operator shall take steps assuring that the non-vapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained. [40 CFR 60.502(e)(5)]

6) Alternative procedures to those described in 40 CFR 502(e)(1) through (5) of Subpart XX for limiting gasoline tank truck loadings may be used upon application to, and approval by, the District. [40 CFR 60.502(e)(6)]

xvii. The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system. [40 CFR 60.502(f)]

[26] MPLX Terminals, LLC—Kramers Lane Terminal utilizes a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading. Each tank truck is required to submit annual vapor tightness tests to MPLX to keep their card and truck authorized in the automated system. Physical cross-checks are no longer conducted at the facility.

xviii. The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible emission reminder signs at the affected loading racks[27]. [40 CFR 60.502(g)]

xix. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the Test Methods and Procedures specified in 40 CFR 60.503(d) (Subpart XX). [40 CFR 60.502(h)]

xx. No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 Pascal (450 mm of water). [40 CFR 60.502(i)]

b. **HAP**

i. See Plant-Wide Specific Conditions S1.b.i. and ii.

For Regulation 40 CFR 63 Subpart BBBBBB:

ii. The owner or operator of a bulk gasoline terminal loading rack(s) with a gasoline throughput (total of all racks) of 250,000 gallons per day[28] or greater must meet each emission limit and management practice in Table 2 to this subpart that applies. [Table 2, Option 1, 40 CFR 63.11088(a)]

1) Equip the loading rack(s) with a vapor collection system designed to collect the TOC (Total Organic Compounds) vapors displaced from cargo tanks during product loading; and [Table 2, 1.(a), 40 CFR 63.11088(a)]

2) Reduce emissions of TOC to less than or equal to 80 mg/l of gasoline loaded into gasoline cargo tanks at the loading rack[29]; and [Table 2, 1.(b), 40 CFR 63.11088(a)]

3) Design and operate the vapor collection system to prevent any TOC vapors collected at one loading rack or lane from passing through another loading rack or lane to the atmosphere; and [Table 2, 1.(c), 40 CFR 63.11088(a)]

[27] MPLX Terminals, LLC—Kramers Lane Terminal has set up guidelines and procedures that every driver must follow in order to load product at the terminal. As part of the loading process, the drivers must conduct an inspection of the tractor and trailer before entering the loading rack, they must have state sticker present on the trailer and a valid vapor tightness test (VTT) on file with MPLX, and they must have a vapor recovery hose attached to the trailer. The drivers are instructed to report any spills, accidents, or emergencies immediately to terminal personnel.

[28] Gallons per day is calculated by summing the current day's throughput, plus the throughput for the previous 364 days, and then dividing that sum by 365.

[29] Compliance with the requirements of 40 CFR 60.502(b) from 40 CFR 60 Subpart XX will demonstrate compliance with this standard.

4) Limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in 40 CFR 60.502(e) through (j) of Subpart XX. For the purposes of this section, the term "tank truck" as used in 40 CFR 60.502(e) through (j) of Subpart XX means "cargo tank" as defined in 40 CFR 63.11100 of Subpart BBBBBB. [Table 2, 1.(d), 40 CFR 63.11088(a)]

c. **TAC**

i. See Plant-Wide Specific Condition S1.c.

ii. The owner or operator shall not allow benzene emissions to exceed 247 pounds during any consecutive 12-month period from either the VRU or PVCU while loading gasoline during truck loading operations.[30] [Regulation 5.21]

iii. The owner or operator shall not allow fugitive benzene emissions to exceed 320 pounds during any consecutive 12-month period from trucks carrying gasoline at the terminal.[31] [Regulation 5.21]

iv. The owner or operator shall control the emissions from the truck loading operation with a vapor recovery unit (VRU) or a vapor combustion unit (PVCU) during all periods of truck loading gasoline. [Regulation 2.17, section 5.1]

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal unless otherwise specified in the permit. The owner or operator shall monitor and maintain records of the following information.

a. **VOC**

i. See Plant-Wide Specific Condition S2.a.

ii. The owner or operator shall perform semi-annual maintenance checks on the vapor recovery unit (VRU) and keep records of the results. The checks

[30] An updated version of the STAR Environmental Acceptability Report was received by the District on July 27, 2016. Controlled benzene emissions of the truck loading operation of gasoline using either a VRU or PVCU were above de minimis levels. In order to demonstrate environmental acceptability, the source performed Tier 4 modeling, using AERMOD with a controlled emission rate of 246.57 lb/yr. The company noted the highest individual, process risk to be below the environmental acceptability goal (EAG) of 10.0 for individual processes on industrial property defined under District Regulation 5.21. The company also noted the individual, process risk to be below the environmental acceptability goal (EAG) of 1.0 for individual processes on non-industrial property defined under District Regulation 5.21.

[31] An updated version of the STAR Environmental Acceptability Report was received by the District on July 27, 2016. Truck fugitive benzene emissions were above de minimis levels. In order to demonstrate environmental acceptability, the source performed Tier 4 modeling, using AERMOD with an uncontrolled emission rate of 320.49 lb/yr. The company noted the highest individual, process risk to be below the environmental acceptability goal (EAG) of 10.0 for individual processes on industrial property defined under District Regulation 5.21. The company also noted the individual, process risk to be below the environmental acceptability goal (EAG) of 1.0 for individual processes on non-industrial property defined under District Regulation 5.21.

include, but are not limited to, an inspection of the VRU's valves, flanges, pumps, seals, gauges, fluid levels, carbon, piping, and associated loading rack components to check for leaks, corrosion, or any equipment defects.[32] [Regulation 2.17, section 5.2, Regulation 1.05 Compliance Plan, revision received June 2016]

iii. When the terminal is staffed, the owner or operator shall ensure that the VRU is operating as designed and tested. Terminal personnel shall complete daily, weekly, and monthly inspections and record various gauge data on the appropriate checklist forms. The checklist forms include, but are not limited to, recording the maximum vacuum pulled during the regeneration cycle and recording the gasoline supply temperature. [Regulation 2.17, section 5.2, Regulation 1.05 Compliance Plan, revision received June 2016]

iv. The owner or operator shall maintain records that identify all periods when the vapor recovery unit (VRU) was offline and the emissions from the terminal loading rack were being controlled by a portable vapor combustion unit (PVCU). The records shall include the date, duration of time (including the start and stop time) that the emissions were being controlled by the PVCU, the product being loaded, and identification of which PVCU was controlling the emissions from the loading rack. [Regulation 2.17, section 5.2]

For Regulation 6.21:

v. The test procedure, as defined in "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals," EPA-450/2-77-026, (OAQPS No. 1.2-082) Appendix A, shall be used to determine compliance with Regulation 6.21, section 3.6. Each bulk gasoline terminal subject to this regulation shall use leak tight tank trucks for the compliance test. For purposes of testing using Appendix A, a leak-tight tank truck is one that during loading has no reading greater than or equal to 100% of the lower explosive limit (LEL, measured as propane), at a distance of 2.5 centimeters (one inch) from the potential leak source associated with the gasoline tank truck or trailer and its vapor collection system, as detected by a combustible gas detector using the test procedure in Regulation 6.21, section 5.4. [Regulation 6.21, section 5.3]

vi. The test procedure, as defined in "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems" (OAQPS 1.2-119, EPA) Appendix B, or an equivalent procedure approved by the District, shall be used to determine compliance with Regulation 6.21, section 3.6.3 during inspections conducted pursuant to KRS 77.165

[32] MPLX Terminals, LLC—Kramers Lane Terminal currently employs mechanical technicians to perform maintenance on the unit.

or KRS 224.10-100 (10) and with the requirements of Regulation 6.21, section 5.3. [Regulation 6.21, section 5.4]

For Regulation 6.22:

vii. See Regulation 40 CFR 60 Subpart XX Monitoring and Record Keeping conditions S2.a.x. through S2.a.xv.

For Regulation 6.43:

viii. The owner or operator shall maintain daily records that show the quantity, in gallons, of each product type loaded through the truck loading operation. [Regulation 6.43, section 15.2.1]

ix. The owner or operator shall maintain daily records, including calculations, of their VOC emissions from the truck loading rack operation. [Regulation 6.43, section 15.2.1]

For Regulation 40 CFR 60 Subpart XX:

x. Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks[33]. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected. [40 CFR 60.502(j)]

xi. A record of each monthly leak inspection required under the Standard for VOC in 40 CFR 60.502(j) shall be kept on file at the terminal for at least 2 years. Inspection records shall include, as a minimum, the following information: [40 CFR 60.505(c)]

1) Date of inspection.

2) Findings (may indicate no leaks discovered; or location, nature, and severity of each leak).

3) Leak determination method.

4) Corrective action, if any (date each leak repaired; reasons for any repair interval in excess of 15 days).

5) Inspector name and signature.

[33] MPLX Terminals, LLC—Kramers Lane Terminal currently performs daily, weekly, and monthly inspections to record various gauge data that ensures the entire emission unit is operating as designed. The vapor recovery hoses utilized, which connect from the terminal VRU line to the transport trailer line, are inspected daily by the terminal operators. Hoses are replaced when there are any indications of damage to the hose itself or the cam-lock fitting. MPLX maintains VRU hoses with fittings onsite and are readily available for change out.

xii. The tank truck vapor tightness documentation required under the Standard for VOC in 40 CFR 60.502(e)(1) (Subpart XX) shall be kept on file at the terminal in a permanent form available for inspection. [40 CFR 60.505(a)]

xiii. The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information: [40 CFR 60.505(b)]

1) Test title: Gasoline Delivery Tank Pressure Test—EPA Reference Method 27.

2) Tank owner and address.

3) Tank identification number.

4) Testing location.

5) Date of test.

6) Tester name and signature.

7) Witnessing inspector, if any: Name, signature, and affiliation.

8) Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs).

xiv. The terminal owner or operator shall keep documentation of all notifications required under the Standard for VOC in 40 CFR 60.502(e)(4) on file at the terminal for at least 2 years. [40 CFR 60.505(d)]

xv. As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required under the Reporting and Record Keeping sections of 40 CFR 60.505 (a), (c), and (d), an owner or operator may comply with the requirements in either paragraph (e)(1) or (2). [40 CFR 60.505(e)]

1) An electronic copy of each record is instantly available at the terminal.[34] [40 CFR 60.505(e)(1)]

(a) The copy of each record in paragraph (e)(1) is an exact duplicate image of the original paper record with certifying signatures. [40 CFR 60.505(e)(1)(i)]

(b) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(1). [40 CFR 60.505(e)(1)(ii)]

2) For facilities that utilize a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (*e.g.*, via a card lock-out system), a copy of the documentation is made available (*e.g.*, via

[34] MPLX Terminals, LLC—Kramers Lane Terminal keeps an electronic copy of each record at their terminal.

facsimile) for inspection by permitting authority representatives during the course of a site visit, or within a mutually agreeable time frame. [40 CFR 60.505(e)(2)]

(a) The copy of each record in paragraph (e)(2) is an exact duplicate image of the original paper record with certifying signatures. [40 CFR 60.505(e)(2)(i)]

(b) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(2). [40 CFR 60.505(e)(2)(ii)]

b. **HAP**

i. See Plant-Wide Specific Condition S2.b.i.

For Regulation 40 CFR 63 Subpart BBBBBB:

ii. Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall keep records of the test results for each gasoline cargo tank loading at the facility as specified in 40 CFR 63.11094(b)(1) and (2). [40 CFR 63.11094(b)]

1) Annual certification testing performed under 40 CFR 63.11092(f)(1) of Subpart BBBBBB (EPA Method 27). [40 CFR 63.11094(b)(1)]

2) The documentation file shall be kept up-to-date for each gasoline cargo tank loading at the facility. The documentation for each test shall include, as a minimum, the following information: [40 CFR 63.11094(b)(2)]

(a) *Name of test:* Annual Certification Test—Method 27. [40 CFR 63.11094(b)(2)(i)]

(b) Cargo tank owner's name and address. [40 CFR 63.11094(b)(2)(ii)]

(c) Cargo tank identification number. [40 CFR 63.11094(b)(2)(iii)]

(d) Test location and date. [40 CFR 63.11094(b)(2)(iv)]

(e) Tester name and signature. [40 CFR 63.11094(b)(2)(v)]

(f) *Witnessing inspector, if any:* Name, signature, and affiliation. [40 CFR 63.11094(b)(2)(vi)]

(g) *Vapor tightness repair:* Nature of repair work and when performed in relation to vapor tightness testing. [40 CFR 63.11094(b)(2)(vii)]

(h) *Test results:* Test pressure; pressure or vacuum change, mm of water; time period of test; number of leaks found with

instrument; and leak definition. [40 CFR 63.11094(b)(2)(viii)]

iii. As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in 40 CFR 63.11094(b), an owner or operator may comply with the requirements in either 40 CFR 63.11094(c)(1) or 40 CFR 63.11094(c)(2). [40 CFR 63.11094(c)]

1) An electronic copy of each record is instantly available at the terminal.[35] [40 CFR 63.11094(c)(1)]

(a) The copy of each record in 40 CFR 63.11094(c)(1) is an exact duplicate image of the original paper record with certifying signatures. [40 CFR 63.11094(c)(1)(i)]

(b) The District is notified in writing that each terminal using this alternative is in compliance with 40 CFR 63.11094(c)(1). [40 CFR 63.11094(c)(1)(ii)]

2) For facilities that use a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system)[36], a copy of the documentation is made available (e.g., via facsimile) for inspection by the District's delegated representatives during the course of a site visit, or within a mutually agreeable time frame. [40 CFR 63.11094(c)(2)]

(a) The copy of each record in 40 CFR 63.11094(c)(2) is an exact duplicate image of the original paper record with certifying signatures. [40 CFR 63.11094(c)(2)(i)]

(b) The District is notified in writing that each terminal using this alternative is in compliance with 40 CFR 63.11094(c)(2). [40 CFR 63.11094(c)(2)(ii)]

iv. Each owner or operator of a bulk gasoline terminal shall: [40 CFR 63.11094(f)]

1) Keep an up-to-date, readily accessible record of the continuous monitoring data required under 40 CFR 63.11092(b) or 40 CFR 63.11092(e) of Subpart BBBBBB. This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record. [40 CFR 63.11094(f)(1)]

[35] MPLX Terminals, LLC—Kramers Lane Terminal keeps an electronic copy of each record at their terminal.

[36] MPLX Terminals, LLC—Kramers Lane Terminal utilizes a card lock-out system to ensure trailers have a valid vapor tightness test before entering and loading at the terminal loading rack.

2) Keep an up-to-date, readily accessible copy of the monitoring and inspection plan required under 40 CFR 63.11092(b)(1)(i)(B)(*2*) or 40 CFR 63.11092(b)(1)(iii)(B)(*2*) of Subpart BBBBBB. [40 CFR 63.11094(f)(3)]

3) Keep an up-to-date, readily accessible record of all system malfunctions, as specified in 40 CFR 63.11092(b)(1)(i)(B)(*2*)(*v*) or 40 CFR 63.11092(b)(1)(iii)(B)(*2*)(*v*) of Subpart BBBBBB. [40 CFR 63.11094(f)(4)]

4) If an owner or operator requests approval to use a vapor processing system or monitor an operating parameter other than those specified in 40 CFR 63.11092(b) of Subpart BBBBBB, the owner or operator shall submit a description of planned reporting and recordkeeping procedures. [40 CFR 63.11094(f)(5)]

c. **TAC**

See Plant-Wide Specific Condition S2.c.

S3. **Reporting (Regulation 2.17, section 5.2)**

a. **VOC**

i. See Plant-Wide Specific Condition S3.a.

ii. The owner or operator shall identify all periods when the vapor recovery unit (VRU) was offline and the emissions from the terminal loading rack were being controlled by the portable vapor combustion unit (PVCU). The report shall include the date, the total number of hours the emissions were being controlled by the PVCU, the product being loaded, identification of which PVCU was controlling the emissions from the loading rack, and the cause or reason the PVCU was used during the truck loading rack operation. If the VRU was used during the entire reporting period, then the owner or operator shall report a negative declaration. [Regulation 2.17, section 5.2]

iii. The owner or operator shall report the total monthly and consecutive 12-month throughput, in gallons, of each product type loaded through the terminal loading rack during each calendar month in the reporting period. [Regulation 2.17, section 5.2]

iv. The owner or operator shall identify and report all periods when the owner or operator deviates from the VRU operating parameters: [Regulation 2.17, section 5.2, Regulation 1.05 Compliance Plan, revision received June 2016]

1) Emission Unit ID number;

2) Date of occurrence;

3) Duration of occurrence (including start time and stop time);

4) The parameter that deviated;

5) Summary information on the cause or reason for each occurrence;

6) Corrective action taken to minimize the extent and duration of each occurrence; and

7) Measures implemented to prevent reoccurrence of the situation that resulted.

8) If there were no deviations during the reporting period, the annual compliance report must include a statement that there were no periods of deviation of operating parameters during the reporting period.

For Regulation 6.21:

v. There are no reporting requirements for Regulation 6.21.

For Regulation 6.22:

vi. The owner or operator shall identify all periods when the VOM (Volatile Organic Material) was not loaded according to the requirements found in District Regulation 6.22, section 3.2. The report shall include: [Regulation 2.17, section 5.2]

1) Emission Unit ID number;

2) Date of occurrence;

3) Duration of occurrence (including start time and stop time)

4) The total VOC emissions during the occurrence;

5) Summary information on the cause or reason for each occurrence;

6) Corrective action taken to minimize the extent and duration of each occurrence; and

7) Measures implemented to prevent reoccurrence of the situation that resulted.

8) If there were no occurrences where the loading requirements were not met during the reporting period, the annual compliance report must include a statement that there were no periods of deviation from the loading requirements of District Regulation 6.22, section 3.2 during the reporting period.

For Regulation 6.43:

vii. There are no reporting requirements for Regulation 6.43.

For Regulation 40 CFR 60 Subpart XX:

viii. There are no reporting requirements for 40 CFR 60 Subpart XX.

b. **HAP**

i. See Plant-Wide Specific Condition S3.b.i.

For Regulation 40 CFR 63 Subpart BBBBBB:

The owner or operator shall submit all required compliance reports at least once every six months, unless more frequent reporting is required by an applicable requirement. All reports shall be sent to the District at the address shown in General Condition 17 in accordance with General Condition 12 and must be postmarked by the 30th day following the end of each reporting period, unless specified elsewhere in this permit.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

Reporting Period	Report Due Date
January 1 - June 30	July 30
July 1 - December 31	January 30 of the following year

ii. Each owner or operator of a bulk terminal or a pipeline breakout station subject to the control requirements of this subpart shall include in a semiannual compliance report to the District the following information, as applicable: [40 CFR 63.11095(a)]

1) For loading racks, each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility. [40 CFR 63.11095(a)(2)]

iii. Each owner or operator of an affected source subject to the control requirements of this subpart shall submit an excess emissions report to the District at the time the semiannual compliance report is submitted. Excess emissions events under this subpart, and the information to be included in the excess emissions report, are specified in 40 CFR 63.11095(b)(1) through (4). [40 CFR 63.11095(b)]

1) Each instance of a non-vapor-tight gasoline cargo tank loading at the facility in which the owner or operator failed to take steps to assure that such cargo tank would not be reloaded at the facility before vapor tightness documentation for that cargo tank was obtained. [40 CFR 63.11095(b)(1)]

2) Each reloading of a non-vapor-tight gasoline cargo tank at the facility before vapor tightness documentation for that cargo tank is obtained by the facility in accordance with 40 CFR 63.11094(b) of Subpart BBBBBB. [40 CFR 63.11095(b)(2)]

3) Each exceedance or failure to maintain, as appropriate, the monitored operating parameter value determined under 40 CFR 63.11092(b) of Subpart BBBBBB. The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a description and timing of the steps taken to repair or perform maintenance on the vapor collection and processing systems or the CMS. [40 CFR 63.11095(b)(3)]

4) Each instance in which malfunctions discovered during the monitoring and inspections required under 40 CFR 63.11092(b)(1)(i)(B)(*2*) and (b)(1)(iii)(B)(*2*) of Subpart BBBBBB

were not resolved according to the necessary corrective actions described in the monitoring and inspection plan. The report shall include a description of the malfunction and the timing of the steps taken to correct the malfunction. [40 CFR 63.11095(b)(4)]

c. **TAC**

i. See Plant-Wide Specific Condition S3.c.

ii. See Specific Condition S3.a.ii.

S4. **Testing (Regulation 2.17, section 5.2)**

a. **VOC**

i. The owner or operator shall use the most recent District accepted performance test results to demonstrate compliance with the emission limits and in the annual emission inventory reporting.[37] [Regulation 2.17, section 5.2]

For Regulation 6.21:

ii. There are no testing requirements for Regulation 6.21.

For Regulation 6.22:

iii. There are no testing requirements for Regulation 6.22.

For Regulation 6.43:

iv. There are no testing requirements for Regulation 6.43.

For Regulation 40 CFR 60 Subpart XX[38]:

v. Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the District (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the District's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to

[37] MPLX Terminals, LLC—Kramers Lane Terminal conducted compliance testing on April 19, 2016 to determine the VOC emission rate from the Vapor Recovery Unit (VRU) during the loading of gasoline into tanker trucks. The VOC emission rate was 0.11 mg VOC/liter of gasoline loaded. MPLX previously conducted a performance test on May 11, 2005.

[38] Since MPLX Terminals, LLC—Kramers Lane Terminal conducted compliance testing on April 19, 2016, they do not need to conduct another performance test for this permit cycle.

abrogate the District's authority to require testing under section 114 of the Act. [40 CFR 60.8(b)]

vi. In conducting the performance tests required in 40 CFR 60.8 of the General Provisions, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR Part 60, Standards of Performance For New Stationary Sources, or other test methods and procedures specified in 40 CFR 60.503, except as provided in 40 CFR 60.8(b) of the General Provisions. The three-run requirement for the Performance Tests in 40 CFR 60.8(f) of the General Provisions does not apply to this subpart. [40 CFR 60.503(a)]

vii. Immediately before the performance test required to determine compliance with the Standard for VOC Emissions in 40 CFR 60.502(b) and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.[39] [40 CFR 60.503(b)]

viii. The owner or operator shall determine compliance with the Standard for VOC in 40 CFR 60.502(b) (Subpart XX) as follows: [40 CFR 60.503(c)]

1) The performance test shall be 6 hours long during which at least 300,000 liters of gasoline is loaded. If this is not possible, the test may be continued the same day until 300,000 liters of gasoline is loaded or the test may be resumed the next day with another complete 6-hour period. In the latter case, the 300,000-liter criterion need not be met. However, as much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs.[40] [40 CFR 60.503(c)(1)]

2) If the vapor processing system is intermittent in operation, the performance test shall begin at a reference vapor holder level and shall end at the same reference point. The test shall include at least two startups and shutdowns of the vapor processor. If this does not occur under automatically controlled operations, the system shall be manually controlled. [40 CFR 60.503(c)(2)]

3) The emission rate (E) of total organic compounds shall be computed using the following equation: [40 CFR 60.503(c)(3)]

[39] The compliance test was conducted on April 19, 2016. As required, the facility used EPA Test Method 21 to monitor for any potential leak sources before conducting their compliance test. MPLX previously conducted a performance test on May 11, 2005.

[40] The compliance test was conducted on April 19, 2016. The facility conducted the performance test for 6 hours and loaded 281,129 gallons (1,064,073 liters) of gasoline. MPLX previously conducted a performance test on May 11, 2005.

$$E = \mathrm{K}\sum_{i=1}^{n}(V_{esi}C_{ei})/(L10^{6})$$

where:

E = emission rate of total organic compounds, mg/liter of gasoline loaded.
V_{esi} = volume of air-vapor mixture exhausted at each interval "i", scm.
C_{ei} = concentration of total organic compounds at each interval "i", ppm.
L= total volume of gasoline loaded, liters.
n = number of testing intervals.
i = emission testing interval of 5 minutes.
K = density of calibration gas, 1.83×10^{6} for propane and 2.41×10^{6} for butane, mg/scm.

4) The performance test shall be conducted in intervals of 5 minutes. For each interval "i", readings from each measurement shall be recorded, and the volume exhausted (V_{esi}) and the corresponding average total organic compounds concentration (C_{ei}) shall be determined. The sampling system response time shall be considered in determining the average total organic compounds concentration corresponding to the volume exhausted. [40 CFR 60.503(c)(4)]

5) The following methods shall be used to determine the volume (V_{esi}) air-vapor mixture exhausted at each interval:[41] [40 CFR 60.503(c)(5)]

   (a) Method 2B shall be used for combustion vapor processing systems. [40 CFR 60.503(c)(5)(i)]

   (b) Method 2A shall be used for all other vapor processing systems. [40 CFR 60.503(c)(5)(ii)]

6) Method 25A or 25B shall be used for determining the total organic compounds concentration (C_{ei}) at each interval. The calibration gas shall be either propane or butane. The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the District.[42] [40 CFR 60.503(c)(6)]

[41] The compliance test was conducted on April 19, 2016. Volume measurements were obtained by the facility using EPA Test Method 2A. MPLX previously conducted a performance test on May 11, 2005.

[42] The compliance test was conducted on April 19, 2016. VOC concentration measurements were obtained by the facility using EPA Test Method 25B. MPLX previously conducted a performance test on May 11, 2005.

7) To determine the volume (L) of gasoline dispensed during the performance test period at all loading racks whose vapor emissions are controlled by the processing system being tested, terminal records or readings from gasoline dispensing meters at each loading rack shall be used. [40CFR 60.503(c)(7)]

ix. The owner or operator shall determine compliance with the standard in 40 CFR 60.502(h) as follows: [40 CFR 60.503(d)]

1) A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument)[43], capable of measuring up to 500 mm of water gauge pressure with ±2.5 mm of water precision, shall be calibrated and installed on the terminal's vapor collection system at a pressure tap located as close as possible to the connection with the gasoline tank truck. [40 CFR 60.503(d)(1)]

2) During the performance test, the pressure shall be recorded every 5 minutes while a gasoline truck is being loaded; the highest instantaneous pressure that occurs during each loading shall also be recorded. Every loading position must be tested at least once during the performance test. [40 CFR 60.503(d)(2)]

x. The performance test requirements under 40 CFR 60.503(c) of Subpart XX do not apply to flares defined in 40 CFR 60.501[44] of Subpart XX and meeting the requirements in 40 CFR 60.18(b) through (f) of the General Provisions. The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in 40 CFR 60.18(b) through (f) of the General Provisions and 40 CFR 60.503(a), (b), and (d) of the Testing section of Subpart XX. [40 CFR 60.503(e)]

b. **HAP**

For Regulation 40 CFR 63 Subpart BBBBBB[45]:

i. Each owner or operator of an affected bulk gasoline terminal under this subpart must submit a Notification of Performance Test, as specified in the General Provisions of 40 CFR 63.9(e) (Subpart A), prior to initiating testing required by 40 CFR 63.11092(a) or 40 CFR 63.11092(b) of Subpart BBBBBB[46]. [40 CFR 63.11093(c)]

[43] The compliance test conducted on April 19, 2016 used a magnahelic gauge.

[44] As defined in 40 CFR 60.501 of Subpart XX, a flare means a thermal oxidation system using an open (without enclosure) flame.

[45] Since MPLX Terminals, LLC—Kramers Lane Terminal conducted compliance testing on April 19, 2016, they do not need to conduct another performance test for this permit cycle.

[46] The District received a revised test protocol on March 15, 2016 from MPLX Terminals, LLC—Kramers Lane Terminal. The facility conducted their compliance test on April 19, 2016 to determine the VOC emission rate

ii. Each owner or operator of a bulk gasoline terminal subject to the 80 mg/l emission standard for bulk terminal gasoline loading rack(s) with a gasoline throughput of 250,000 gallons per day or greater must comply with the requirements in 40 CFR 63.11092(a) through (d). [40 CFR 63.11092(a)]

1) Conduct a performance test on the vapor processing and collection systems according to either 40 CFR 63.11092(a)(1)(i) or 40 CFR 63.11092(a)(1)(ii). [40 CFR 63.11092(a)(1)]

(a) Use the test methods and procedures found in 40 CFR 60.503 of Subpart XX, except a reading of 500 parts per million shall be used to determine the level of leaks to be repaired under 40 CFR 60.503(b). [40 CFR 63.11092(a)(1)(i)]

(b) Use alternative test methods and procedures in accordance with the alternative test method requirements in 40 CFR 63.7(f) of the General Provisions (Subpart A). [40 CFR 63.11092(a)(1)(ii)]

2) If you are operating your gasoline loading rack in compliance with an enforceable State, local, or tribal rule or permit that requires your loading rack to meet an emission limit of 80 milligrams (mg), or less, per liter of gasoline loaded (mg/l), you may submit a statement by a responsible official of your facility certifying the compliance status of your loading rack in lieu of the test required under 40 CFR 11092(a)(1) of Subpart BBBBBB.[47] [40 CFR 63.11092(a)(2)]

3) The owner or operator shall use the most recent District accepted performance test results to demonstrate compliance with the emission limits and in the annual emission inventory reporting. [Regulation 2.17, section 5.2]

4) The performance test requirements of 40 CFR 63.11092(a) do not apply to flares defined in 40 CFR 63.11100 of Subpart BBBBBB[48] and meeting the flare requirements in the General Provisions of 40 CFR 63.11(b) (Subpart A). The owner or operator shall demonstrate that the flare and associated vapor collection system is

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from the Vapor Recovery Unit (VRU) during the loading of gasoline into tanker trucks. MPLX previously conducted a performance test on May 11, 2005.

[47] MPLX Terminals, LLC—Kramers Lane Terminal has elected to comply with the test alternative mentioned under 40 CFR 63.11092(a)(2). The company already performs the required testing mentioned in 40 CFR 60 Subpart XX under Emission Unit U2 – Truck Loading Rack. The results obtained from this performance test are below the emission rate limit of 80 milligrams of VOC per liter of gasoline loaded—0.11 mg VOC/liter of gasoline loaded on April 19, 2016. Previously, MPLX conducted a performance test on May 11, 2005.

[48] As defined in 40 CFR 63.11100 of Subpart BBBBBB, a flare means a thermal oxidation system using an open (without enclosure) flame.

in compliance with the requirements in the General Provisions of 40 CFR 63.11(b) (Subpart A) and the Standards of Performance for Bulk Gasoline Terminals in 40 CFR 60.503(a), (b), and (d) (Subpart XX). [40 CFR 63.11092(a)(4)]

iii. Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the vapor processor systems, as specified in 40 CFR 11092(b)(1) through (5). [40 CFR 63.11092(b)]

1) For each performance test conducted under 40 CFR 11092(a)(1), the owner or operator shall determine a monitored operating parameter value for the vapor processing system using the procedures specified in 40 CFR 11092(b)(1)(i), (iii), or (iv). During the performance test, continuously record the operating parameter as specified under 40 CFR 11092(b)(1)(i), (iii), or (iv).[49] [40 CFR 63.11092(b)(1)]

(a) Where a carbon adsorption system is used, the owner or operator shall monitor the operation of the system as specified in 40 CFR 11092(b)(1)(i)(A) or (B).[50] [40 CFR 63.11092(b)(1)(i)]

(i) A continuous emissions monitoring system (CEMS) capable of measuring organic compound concentration shall be installed in the exhaust air stream. [40 CFR 63.11092(b)(1)(i)(A)]

(ii) As an alternative to 40 CFR 63.11092(b)(1)(i)(A), you may choose to meet the requirements listed in 40 CFR 63.11092(b)(1)(i)(B)(*1*) and (*2*). [40 CFR 63.11092(b)(1)(i)(B)]

(1) Carbon adsorption devices shall be monitored as specified in 40 CFR 63.11092(b)(1)(i)(B)(*1*)(*i*),(*ii*), and (*iii*). [40 CFR 63.11092(b)(1)(i)(B)(1)]

a) Vacuum level shall be monitored using a pressure transmitter installed in the vacuum pump suction line, with the

[49] MPLX Terminals, LLC—Kramers Lane Terminal has elected to observe the vacuum level as their monitor operating parameter value for the vapor recovery unit (VRU). The lowest maximum required vacuum level needed to assure regeneration of the carbon beds in the VRU is 24" Hg. The parameter value was obtained from the updated Notification of Compliance Status (NOCS) received on February 11, 2015.

[50] MPLX Terminals, LLC—Kramers Lane Terminal has elected to follow the requirements listed under option to 40 CFR 63.11092(b)(1)(i)(B).

measurements displayed on a gauge that can be visually observed. Each carbon bed shall be observed during one complete regeneration cycle on each day of operation of the loading rack to determine the maximum vacuum level achieved. [40 CFR 63.11092(b)(1)(i)(B)(1)(i)]

b) Conduct annual testing of the carbon activity for the carbon in each carbon bed. Carbon activity shall be tested in accordance with the butane working capacity test of the American Society for Testing and Materials (ASTM) Method D 5228–92 (incorporated by reference, see 40 CFR 63.14 of the General Provisions), or by another suitable procedure as recommended by the manufacturer. [40 CFR 63.11092(b)(1)(i)(B)(1)(ii)]

c) Conduct monthly measurements of the carbon bed outlet volatile organic compounds (VOC) concentration over the last 5 minutes of an adsorption cycle for each carbon bed, documenting the highest measured VOC concentration. Measurements shall be made using a portable analyzer, or a permanently mounted analyzer, in accordance with 40 CFR part 60, Appendix A-7, EPA Method 21 for open-ended lines.[51] [40 CFR 63.11092(b)(1)(i)(B)(1)(iii)]

(2) Develop and submit to the District a monitoring and inspection plan that describes the owner or operator's approach for meeting the requirements in 40 CFR 63.11092(b)(1)(i)(B)(*2*)(*i*) through (*v*).[52] [40 CFR 63.11092(b)(1)(i)(B)(2)]

[51] From the updated NOCS received on February 11, 2015, MPLX Terminals, LLC—Kramers Lane Terminal will be measuring the VOC concentration during the last 5 minutes of each carbon bed's adsorption cycle using a portable analyzer.

[52] The District received a Monitoring and Inspection Plan on February 11, 2015, which was included in the updated NOCS.

a) The lowest maximum required vacuum level and duration needed to assure regeneration of the carbon beds shall be determined by an engineering analysis or from the manufacturer's recommendation and shall be documented in the monitoring and inspection plan.[53] [40 CFR 63.11092(b)(1)(i)(B)(2)(i)]

b) The owner or operator shall verify, during each day of operation of the loading rack, the proper valve sequencing, cycle time, gasoline flow, purge air flow, and operating temperatures. Verification shall be through visual observation, or through an automated alarm or shutdown system that monitors system operation. A manual or electronic record of the start and end of a shutdown event may be used. [40 CFR 63.11092(b)(1)(i)(B)(2)(ii)]

c) The owner or operator shall perform semi-annual preventive maintenance inspections of the carbon adsorption system, including the automated alarm or shutdown system for those units so equipped, according to the recommendations of the manufacturer of the system.[54] [40 CFR 63.11092(b)(1)(i)(B)(2)(iii)]

d) The monitoring plan developed under 40 CFR 63.11092(b)(1)(i)(B)(*2*) shall specify conditions that would be considered malfunctions of the carbon adsorption system during the inspections or automated monitoring performed

[53] For MPLX Terminals, LLC—Kramers Lane Terminal, the lowest maximum required vacuum level needed to assure regeneration of the carbon beds in the VRU is 24" Hg, as provided in the updated NOCS received on February 11, 2015.

[54] MPLX Terminals, LLC—Kramers Lane Terminal performs semi-annual maintenance checks on the vapor recovery unit (VRU) and keep records of the results. The checks include, but are not limited to, an inspection of the VRU's valves, flanges, pumps, seals, gauges, fluid levels, carbon, piping, and associated loading rack components to check for leaks, corrosion, or any equipment defects.

under 40 CFR 63.11092(b)(1)(i)(B)(*2*)(*i*) through (*iii*), describe specific corrective actions that will be taken to correct any malfunction, and define what the owner or operator would consider to be a timely repair for each potential malfunction. [40 CFR 63.11092(b)(1)(i)(B)(2)(iv)]

e) The owner or operator shall document the maximum vacuum level observed on each carbon bed from each daily inspection and the maximum VOC concentration observed from each carbon bed on each monthly inspection as well as any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction. [40 CFR 63.11092(b)(1)(i)(B)(2)(v)]

(b) Where a thermal oxidation system other than a flare is used, the owner or operator shall monitor the operation of the system as specified in 40 CFR 63.11092(b)(1)(iii)(A) or (B).[55] [40 CFR 63.11092(b)(1)(iii)]

(i) A continuous parameter monitoring system (CPMS) capable of measuring temperature shall be installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs. [40 CFR 63.11092(b)(1)(iii)(A)]

(ii) As an alternative to 40 CFR 63.11092(b)(1)(iii)(A), the owner or operator may choose to meet the

[55] MPLX Terminals, LLC—Kramers Lane Terminal has elected to follow the requirements listed under option 40 CFR 63.11092(b)(1)(iii)(B)

requirements listed in 40 CFR 63.11092(b)(1)(iii)(B)(*1*) and (*2*). [40 CFR 63.11092(b)(1)(iii)(B)]

(1) The presence of a thermal oxidation system pilot flame shall be monitored using a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, installed in proximity of the pilot light, to indicate the presence of a flame. The heat-sensing device shall send a positive parameter value to indicate that the pilot flame is on, or a negative parameter value to indicate that the pilot flame is off.[56] [40 CFR 63.11092(b)(1)(iii)(B)(1)]

(2) Develop and submit to the District a monitoring and inspection plan that describes the owner or operator's approach for meeting the requirements in 40 CFR 63.11092(b)(1)(iii)(B)(*2*)(*i*) through (*v*).[57] [40 CFR 63.11092(b)(1)(iii)(B)(2)]

a) The thermal oxidation system shall be equipped to automatically prevent gasoline loading operations from beginning at any time that the pilot flame is absent.[58] [40 CFR 63.11092(b)(1)(iii)(B)(2)(i)]

b) The owner or operator shall verify, during each day of operation of the loading rack, the proper operation of the assist-air blower and the vapor line valve. Verification shall be through visual observation, or through an automated alarm or shutdown system that monitors system operation. A manual or electronic record of the start and end of a shutdown event may be

[56] From the updated NOCS received on February 11, 2015, MPLX Terminals, LLC—Kramers Lane Terminal has the PVCU equipped with an ultraviolet beam detector that automatically prevents gasoline loading operations from beginning at any time the pilot flame is absent.

[57] The District received a Monitoring and Inspection Plan on February 11, 2015, which was included in the updated NOCS.

[58] The PVCU is equipped with an ultraviolet beam detector that automatically prevents gasoline loading operations from beginning at any time the pilot flame is absent.

used. [40 CFR 63.11092(b)(1)(iii)(B)(2)(ii)]

c) The owner or operator shall perform semi-annual preventive maintenance inspections of the thermal oxidation system, including the automated alarm or shutdown system for those units so equipped, according to the recommendations of the manufacturer of the system. [40 CFR 63.11092(b)(1)(iii)(B)(2)(iii)]

d) The monitoring plan developed under 40 CFR 63.11092(b)(1)(iii)(B)(*2*) shall specify conditions that would be considered malfunctions of the thermal oxidation system during the inspections or automated monitoring performed under 40 CFR 63.11092(b)(1)(iii)(B)(*2*)(*ii*) and (*iii*), describe specific corrective actions that will be taken to correct any malfunction, and define what the owner or operator would consider to be a timely repair for each potential malfunction. [40 CFR 63.11092(b)(1)(iii)(B)(2)(iv)]

e) The owner or operator shall document any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction. [40 CFR 63.11092(b)(1)(iii)(B)(2)(v)]

(c) Monitoring an alternative operating parameter or a parameter of a vapor processing system other than those listed in 40 CFR 63.11092(b)(1)(i) and (iii) will be allowed upon demonstrating to the District's satisfaction that the alternative parameter demonstrates continuous compliance

with the emission standard in 40 CFR 63.11088(a). [40 CFR 63.11092(b)(1)(iv)]

2) Where a flare meeting the General Provisions requirements in 40 CFR 63.11(b) is used, a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, must be installed in proximity to the pilot light to indicate the presence of a flame. [40 CFR 63.11092(b)(2)]

3) Determine an operating parameter value based on the parameter data monitored during the performance test, supplemented by engineering assessments and the manufacturer's recommendations. [40 CFR 63.11092(b)(3)]

4) Provide for the District's approval the rationale for the selected operating parameter value, monitoring frequency, and averaging time, including data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the emission standard in 40 CFR 63.11088(a). [40 CFR 63.11092(b)(4)]

5) If the owner or operator has chosen to comply with the performance testing alternatives provided under 40 CFR 63.11092(a)(2) of Subpart BBBBBB, the monitored operating parameter value may be determined according to the provisions in 40 CFR 63.11092(b)(5)(i) or 40 CFR 63.11092(b)(5)(ii).[59] [40 CFR 63.11092(b)(5)]

   (a) Monitor an operating parameter that has been approved by the District and is specified in the facility's current enforceable operating permit. At the time that the District requires a new performance test, the owner or operator must determine the monitored operating parameter value according to the requirements specified in 40 CFR 63.11092(b). [40 CFR 63.11092(b)(5)(i)]

   (b) Determine an operating parameter value based on engineering assessment and the manufacturer's recommendation and submit the information specified in 40 CFR 63.11092(b)(4) for approval by the District. At the time that the District requires a new performance test, the owner or operator must determine the monitored operating

[59] MPLX Terminals, LLC—Kramers Lane Terminal has elected to observe vacuum level and temperature as their monitor operating parameter values for the vapor recovery unit (VRU). The lowest maximum required vacuum level needed to assure regeneration of the carbon beds in the VRU is 24" Hg. The temperature of a carbon bed in the VRU shall not exceed 200 °F during any individual regeneration cycle. These parameter values were obtained from the revised NOCS received on February 11, 2015.

parameter value according to the requirements specified in 40 CFR 63.11092(b). [40 CFR 63.11092(b)(5)(ii)]

iv. For performance tests performed after the initial test required under 40 CFR 63.11092(a), the owner or operator shall document the reasons for any change in the operating parameter value since the previous performance test. [40 CFR 63.11092(c)]

v. Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall comply with the requirements in 40 CFR 63.11092(d)(1) through (4). [40 CFR 63.11092(d)]

1) Operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the operating parameter value for the parameters described in 40 CFR 63.11092(b)(1). [40 CFR 63.11092(d)(1)]

2) In cases where an alternative parameter pursuant to 40 CFR 63.11092(b)(1)(iv) or 63.11092(b)(5)(i) is approved, each owner or operator shall operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the alternative operating parameter value. [40 CFR 63.11092(d)(2)]

3) Operation of the vapor processing system in a manner exceeding or going below the operating parameter value, as appropriate, shall constitute a violation of the emission standard in 40 CFR 63.11088(a), except as specified in 40 CFR 63.11092(d)(4). [40 CFR 63.11092(d)(3)]

4) For the monitoring and inspection, as required under 40 CFR 63.11092(b)(1)(i)(B)(*2*) and 40 CFR 63.11092(b)(1)(iii)(B)(*2*), malfunctions that are discovered shall not constitute a violation of the emission standard in 40 CFR 63.11088(a) if corrective actions as described in the monitoring and inspection plan are followed. The owner or operator must: [40 CFR 63.11092(d)(4)]

(a) Initiate corrective action to determine the cause of the problem within 1 hour; [40 CFR 63.11092(d)(4)(i)]

(b) Initiate corrective action to fix the problem within 24 hours; [40 CFR 63.11092(d)(4)(ii)]

(c) Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions; [40 CFR 63.11092(d)(4)(iii)]

(d) Minimize periods of start-up, shutdown, or malfunction; and [40 CFR 63.11092(d)(4)(iv)]

(e) Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem. [40 CFR 63.11092(d)(4)(v)]

vi. The annual certification test for gasoline cargo tanks shall consist of the test methods specified in 40 CFR 63.11092(f)(1). Affected facilities that are subject to subpart XX of 40 CFR part 60 may elect, after notification to the subpart XX delegated authority, to comply with 40 CFR 63.11092(f)(1). [40 CFR 63.11092(f)]

1) *EPA Method 27, Appendix A–8, 40 CFR part 60*. Conduct the test using a time period (t) for the pressure and vacuum tests of 5 minutes. The initial pressure (P_i) for the pressure test shall be 460 millimeters (mm) of water (18 inches of water), gauge. The initial vacuum (V_i) for the vacuum test shall be 150 mm of water (6 inches of water), gauge. The maximum allowable pressure and vacuum changes (Δ p, Δ v) for all affected gasoline cargo tanks is 3 inches of water, or less, in 5 minutes. [40 CFR 63.11092(f)(1)]

vii. *Conduct of performance tests*. Performance tests conducted for this subpart shall be conducted under such conditions as the District specifies to the owner or operator, based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the District such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.11092(g)]

c. **TAC**

There are no testing requirements required by the STAR regulations.

Alternative Operating Scenario

The owner or operator shall be allowed to utilize a portable vapor combustion unit (PVCU) or portable flare during periods of downtime of the vapor recovery unit (VRU). Loading of gasoline is not allowed unless the emissions are being controlled by the VRU, PVCU, or portable flare. The facility shall continue to follow any applicable requirements listed under the Monitoring and Record Keeping, Reporting, and Testing sections of this Emission Unit.[60]

The facility is also authorized to continue loading up to 100,000 gallons per consecutive 12-month period of distillate product without any control device. The loading of distillate uncontrolled is only performed during emergency situations, such as distributing product in Jefferson and surrounding counties experiencing power outages due to periods of inclement weather (ice, snow, thunderstorms, tornados, etc.).

The facility shall continue to monitor loading rates and calculate emissions for both alternative scenarios to ensure compliance is maintained.

[60] The PVCUs and portable flares that are brought onsite have been tested to ensure they meet all Code of Federal Regulation requirements.

Emission Unit U3: Barge Loading and Unloading Operation

U3 Unit Description

One (1) barge loading and unloading operation used to transfer gasoline products from barges into storage tanks (unloading), as well as load various finished gasoline products from the bulk terminal storage tanks onto barges (loading).

U3 Applicable Regulations

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1 through 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 7
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U3 Equipment

Emission Point ID	Description Make/Model	Maximum Capacity	Control Device (Control ID)	Stack ID	Installation Date
E2	One (1) barge loading and unloading operation	147,000 gal/hr for the barge loading operation	N/A	N/A	1957

U3 Controls

There are no control devices associated with Emission Unit U3.

U3 Specific Conditions

S1. **Standards (Regulation 2.17, section 5.1)**

a. **VOC**

i. See Plant-Wide Specific Condition S1.a.

ii. The owner or operator shall not allow or cause the throughput of the following product types to exceed the limits during any consecutive 12-month period for the barge loading operation: [Regulation 2.17, section 5.1]

Limit (gal/12-month period)	Product
2,352,000 (equivalent to 2 barges)	Gasoline
1,176,000 (equivalent to 1 barges)	Distillates
1,176,000 (equivalent to 1 barges)	Ethanol

b. **HAP**

See Plant-Wide Specific Conditions S1.b.i. and ii.

c. **TAC**

See Plant-Wide Specific Condition S1.c.[61]

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal unless otherwise specified in the permit. The owner or operator shall monitor and maintain records of the following information.

a. **VOC**

i. See Plant-Wide Specific Condition S2.a.

ii. The owner or operator shall maintain monthly records that show the quantity, in gallons, of each product type loaded through the barge loading operation. [Regulation 2.17, section 5.2]

b. **HAP**

See Plant-Wide Specific Condition S2.b.i.

c. **TAC**

See Plant-Wide Specific Condition S2.c.

S3. **Reporting (Regulation 2.16, section 4.1.9.3)**

a. **VOC**

i. See Plant-Wide Specific Condition S3.a.

[61] The District received an updated environmental acceptability (EA) demonstration on July 27, 2016 that provided TAC emissions for the company's barge operation. The information in the report demonstrated that the uncontrolled potential emissions from the barge operation can be classified as de minimis.

ii. The owner or operator shall report the total monthly and consecutive 12-month throughput, in gallons, of each product type loaded through the barge loading operation during each calendar month in the reporting period. [Regulation 2.17, section 5.2]

b. **HAP**

See Plant-Wide Specific Condition S3.b.i.

c. **TAC**

See Plant-Wide Specific Condition S3.c.

Alternative Operating Scenario

The owner or operator is authorized to load a barge of gasoline, ethanol, transmix, and distillate. Barge loading is only performed during emergency situations, such as removing product that was blended incorrectly at the truck loading rack or distributing product to neighboring regions experiencing power outages due to periods of inclement weather (ice, snow, thunderstorms, tornados, etc.). The facility shall continue to monitor loading rates and calculate emissions to ensure compliance is maintained.[62]

[62] MPLX Terminals, LLC—Kramers Lane Terminal will monitor the throughput in gallons and calculate the associated emissions in order to maintain compliance.

Emission Unit U4: Butane Blending Operation

U4 Applicable Regulations

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.		

U4 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E20	Butane blending operation that offloads butane from tanker trucks into a recirculation line that feeds into existing internal floating roof gasoline storage tank 55-2 (Emission Point E6 in Permit O-0143-16-F). The butane offloading equipment will be skid-mounted and include flex hoses, valves, and connectors.	2018	STAR	N/A	N/A

U4 Control Devices

There are no control devices associated with Emission Unit U4.

U4 Specific Conditions

S1. **Standards**
[Regulation 2.03, section 6.1]

a. **HAP**

i. The owner or operator shall limit the total plantwide combined HAPs emissions from the plant to less than 25 tons during any consecutive 12-month period.

ii. The owner or operator shall limit the total plantwide single HAP emissions from the plant to less than 10 tons during any consecutive 12-month period.

b. **TAC**

i. The owner or operator shall not allow emissions of any TAC to exceed *de minimis* levels.[63] [Regulations 5.01 and 5.21]

ii. If the TAC does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values. The form, located in Attachment 1, may be used for determining BAC and *de minimis* values. [Regulation 5.20, Sections 3 and 4]

c. **VOC**

i. The owner or operator shall limit the total plantwide VOC emissions from the plant to less than 100 tons during any consecutive 12-month period.

S2. **Monitoring and Record Keeping**
[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. **HAP**

i. The owner or operator shall monthly maintain records, including calculations, of their calendar month and consecutive 12-month, plantwide combined and single HAP emissions. The plantwide combined and single HAP emissions must include HAP emissions from the butane blending operation.

ii. The owner or operator shall maintain a copy of the (Material) Safety Data Sheet ((M)SDS) for each HAP-containing material used at the plant. The (M)SDS shall have documentation of the weight percent of each individual HAP.

[63] A one-time TAC EA Demonstration was performed that demonstrated that the butane blending process was environmentally acceptable due to the uncontrolled potential emissions being below *de minimis* levels.

b. **TAC**

The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to, (M)SDS, analysis of emissions, and/or modeling results.

c. **VOC**

i. The owner or operator shall monthly maintain records, including calculations, of their calendar month and consecutive 12-month, plantwide VOC emissions. The plantwide VOC emissions must include VOC emissions from the butane blending operation.

S3. **Reporting (Regulation 2.16, section 4.1.9.3)**
[Regulation 2.03, section 6.1]

The owner or operator shall submit annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.17, section 3.5.

- "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete".
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

Reporting Period	Report Due Date
January 1st through December 31th	March 1st

a. **HAP**

i. The owner or operator shall annually report their calendar month and consecutive 12-month, plantwide combined and single HAP emissions. The report must include combined and single HAP emissions from the butane blending operation.

b. **TAC**

The owner or operator shall annually report any TAC emissions that were greater than de minimis or a negative declaration..

c. **VOC**

i. The owner or operator shall annually report their calendar month and consecutive 12-month, plantwide VOC emissions. The report must include VOC emissions from the butane blending operation.

Off-Permit Documents

A revised 1.05 Compliance Plan referenced in this permit was received on June 15, 2016. A previous version of the 1.05 Compliance Plan was received on February 16, 2006.

Insignificant Activities

Equipment	Quantity	Regulation Basis
Storage tanks listed in Emission Unit U1 (Storage Tanks). These include Emission Points E9, E10, E11, E12, E13, E14, and E15.	7	1.02, Appendix A, sec. 3.9.2
Brazing, soldering, or welding equipment used by MPLX or hired contractors for projects/maintenance.	1	1.02, Appendix A, sec. 3.4
Fume hood, located in testing room, used for testing samples of product.	1	1.02, Appendix A, sec. 3.11
Blast cleaning equipment using a suspension of abrasives in water. As an example, the cleaning is performed to remove paint or coating from a tank or piping. For weather and safety purposes, sandblasting (dry) is required to be performed when outdoor temperatures are below freezing (32 °F).[64]	1	1.02, Appendix A, sec. 3.13
Groundwater monitoring well that is manually sampled quarterly.	1	1.02, Appendix A, sec. 3.20
Portable storage tanks less than 500 gallons are used to refuel equipment, such as dump trucks, track hoes, etc., used by hired contractors for temporary maintenance/repair projects.[65]	2	1.02, Appendix A, sec. 3.23
Enclosed, sealed pipeline relief sump for the MPLX pipelines to relieve pressure into.	1	1.02, sec. 1.38.1.1
Portable FRAC tanks for terminal maintenance/projects or for spill cleanup. Each has a capacity of no more than 21,000 gallons.[66]	Up to 4	1.02, sec. 1.38.1.1
Vacuum trucks for terminal maintenance/projects or for spill cleanup.[67]	Up to 4	1.02, sec. 1.38.1.1
Oil-water separator recovering less than 200 gallons a day.	1	1.02, sec. 1.38.1.2.1

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

[64] All types of blasting are performed within a closed area (inside a storage tank) or tents/canopies are used to prevent particulate from leaving the site. All collected waste from the cleaning is disposed of offsite.

[65] No portable storage tanks are kept onsite; all portable storage tanks would be rented by MPLX or the hired contractor.

[66] No portable FRAC tanks are kept onsite; all portable FRAC tanks would be rented by MPLX or the hired contractor.

[67] No vacuum trucks are kept onsite; all vacuum trucks would be rented by MPLX or the hired contractor.

3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Attachment 1 – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____

Compound name _____ CAS No. _____

Molecular weight _____

BAC_C = _____ µg/m^3, annual BAC_{NC} = _____ µg/m^3, _____ (avg period)

de minimis _____ lb/hr; _____ lb/_____; _____ lb/year

I. Carcinogen Risk - BAC_C (annual averaging period) Carcinogen ☐ YES ☐ NO

1. ☐ IRIS 10^{-6} risk = _____ µg/m^3 URE = _____ (µg/m^3)$^{-1}$ Date _____
2. ☐ Cal 10^{-6} risk = _____ µg/m^3 IUR = _____ (µg/m^3)$^{-1}$ Date _____
3. ☐ Mich 10^{-6} risk = _____ µg/m^3 Date _____
4. ☐ NTP Part A ☐ YES ☐ NO Part B ☐ YES ☐ NO
5. ☐ IARC Group 1 ☐ YES ☐ NO Group 2A ☐ YES ☐ NO Group 2B ☐ YES ☐ NO
6. ☐ ATSDR
7. ☐ Sec. 3.3.4 Method # _____ 10^{-6} risk = _____ µg/m^3 Date _____
8. ☐ Default 0.0004 µg/m^3

II. Chronic Noncancer Risk - BAC_{NC} (averaging period as specified)

1. ☐ IRIS RfC = _____ µg/m^3, annual Date _____
2. ☐ Cal REL = _____ µg/m^3, annual Date _____
3. ☐ IRIS [1] RfD = _____ µg/kg/day × (70/20) = _____ µg/m^3, annual Date _____
4. ☐ Mich ITSL = _____ µg/m^3, _____ averaging period Date _____
5. ☐ TLV NIOSH = _____ µg/m^3 × 0.01 = _____ µg/m^3, 8-hour Date _____
6. ☐ RTECS [1] _____ = _____ µg/m^3, annual Date _____
   (describe calculation from Reg 5.20, sections 4.6 - 4.10)
7. ☐ Default 0.004 µg/m^3

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

III. *De minimis calculations*

1. ☐ Carcinogen BAC_C _____ µg/m^3 × 0.54 = _____ lb/hour
   BAC_C _____ µg/m^3 × 480 = _____ lb/year

2. ☐ Chronic Noncancer Risk _____ (averaging period)
   BAC_{NC} _____ µg/m^3 × F factor = _____ lb/(avg period)

BAC averaging period	F factor for avg period			
	Annual	24 hour	8 hour	1 hour
Annual	480			0.54
24 hours		0.12		0.05
8 hours			0.02	0.02
1 hour				0.001

[Regulation 5.22, table 1]

Prepared by _____ Date _____